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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,627	04/16/2002	Ah Hwee Tan	P21834	7768

7055 7590 10/16/2006

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EXAMINER	
COUGHLAN, PETER D	

ART UNIT	PAPER NUMBER
2129	

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/049,627	TAN ET AL.	
	Examiner	Art Unit	
	Peter Coughlan	2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 9-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 9-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

1. This office action is in response to an AMENDMENT entered July 6, 2006 for the patent application 10/049627 filed on February 22, 2002.

2. All previous Office Actions are fully incorporated into this Office Action by reference.

Status of Claims

3. Claims 1-4, 9-25 are pending.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19, 22, 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. All these claims have the term 'learning mode' in them. The problem arises that the term is not mentioned at all in the specification. The closest match is 'learning

sub-mode' on pages 7 and 22 of the specification. These must be different due to the fact they are labeled different.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masand et al in view of White et al.(U. S. Patent 5251131, referred to as **Masand**; U. S. Patent 5933490, referred to as **White**)

Claim 1

Masand teaches a feature extractor that extracts a plurality of features from a document (**Masand,** abstract, 'Feature extractor' of applicant is demonstrated by 'features are extracted' of Masand.); a classifier operable on the extracted features to process the document in a knowledge acquisition mode in which the association of a

classification with the document is added incrementally to a knowledge base (**Masand,** C29:63 through C30:39; 'Knowledge acquisition mode' of applicant is equivalent to 'training data bases (TDB) of Masand. 'Added incrementally' of applicant is equivalent to 'piecemeal approach' of Masand.) and in a document classification mode in which the classifier, using the knowledge base, is operable to determine a predicted classification for the document (**Masand,** C3:3-24; An example of a 'knowledge base' of applicant is equivalent to 'medical database' of Masand.), the classifier being switchable between the modes under user control (**Masand,** abstract; The fact there exists a training database implies there exists a switch to switch between modes (training and classifying). If no switch exists, then one could only train the classifier or one could only classify without a trained classifier.); and a router (**Masand,** C9:4-16) arranged to route the document to one of a plurality of destinations in dependence upon the classification(**Masand,** C1:9-12 and C1:21-26), wherein the classification has associated therewith a confidence value (**Masand,** C7:1-25; 'Confidence value' of applicant is equivalent to 'cumulative comparison score' of Masand.), and wherein the router is arranged to compare the confidence value is comparable-to a threshold, the router being arranged to make at least one of an automatic routing decision and a manual routing decision in dependence upon the comparison. (**Masand,** C7:1-25; Comparing a confidence value to a threshold value of applicant is equivalent to comparing a 'cumulative comparison score' to a 'predetermined threshold score' of Masand.)

Masand does not teach wherein the threshold is adjustable to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing.

White teaches wherein the threshold is adjustable (**White,** C18:5-13; 'Threshold is adjustable' of applicant is equivalent to 'dynamic threshold' of White.) to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing. (**White,** C13:65 through C14:6; 'Automatic routing' of applicant is equivalent to either 'automatic route selection' of 'automatic alternate routing' of White.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Masand by having an adjustable threshold as taught by White to have the threshold is adjustable to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing.

For the purpose of having a flexible system so that it can change with new information.

Claim 17

Masand teaches a feature extractor that extracts a plurality of features from a document (**Masand,** abstract, 'Feature extractor' of applicant is demonstrated by 'features are extracted' of Masand.); a classifier operable, using a knowledge base, to determine from the features a predicted classification for the document, the classification having a confidence value associated therewith (**Masand,** C7:1-25;

'Confidence value' of applicant id equivalent to 'cumulative comparison score' of Masand.); and a router arranged to compare the confidence value to a threshold and make a decision to route the document automatically to one of a plurality of destinations and or to a destination for manual routing in dependence upon the comparison. (**White,** C13:65 through C14:6; 'Automatic routing' of applicant is equivalent to either 'automatic route selection' of 'automatic alternate routing' of White.)

Masand does not teach wherein the threshold is adjustable to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing.

White teaches wherein the threshold is adjustable to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing. (**White,** C18:5-13; 'Threshold is adjustable' of applicant is equivalent to 'dynamic threshold' of White.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Masand by have an adjustable threshold as taught by White to have the threshold is adjustable to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing.

For the purpose of having a flexible system so that it can change with new information.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Masand, and White, as set forth above, and further in view of Tan ('Learning user profiles for personalized information dissemination', referred to as **Tan**)

Claim 2

Masand, and White do not teach a supervised adaptive resonance theory (ART) system.

Tan teaches a supervised adaptive resonance theory (ART) system. (**Tan,** Abstract) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by the detail of what type of neural network as taught by Tan to have a supervised adaptive resonance theory (ART) system.

For the purpose of having a system that performs incremental supervised learning of recognition categories and multidimensional maps for both binary and analog patterns.

Claim 4

Masand, and White do not teach an adaptive resonance associative map (ARAM) system.

Tan teaches an adaptive resonance associative map (ARAM) system. (**Tan,** Abstract) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by going into detail into what kind of neural network as taught by Tan to have an adaptive resonance associative map (ARAM) system.

For the purpose of providing a predicted classification for the output document in response to the input feature vector.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Masand, and White, as set forth above, and further in view of Tan2 ('Cascade ARTMAP: Integrating neural computation and symbolic knowledge processing', referred to as **Tan2**)

Claim 3

Masand, and White do not teach the system comprises an ARTMAP system.

Tan2 teaches the system comprises an ARTMAP system. (**Tan2,** abstract) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by describing what type of neural network is used as taught by Tan2 to have the system comprises an ARTMAP system.

For the purpose of allowing incremental learning and rule insertion.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Masand, and White, as set forth above, and further in view of Alam. (U. S. Patent 6104500, referred to as **Alam**)

Claim 9

Masand, and White do not teach one of the plurality of destinations is a system administrator workstation where the router is arranged to route the document for manual routing after the manual routing decision.

Alam teaches one of the plurality of destinations is a system administrator workstation where the router is arranged to route the document for manual routing after the manual routing decision. (**Alma,** C10:26-40; 'System administrator' of applicant is equivalent to 'operator' of Alma.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by having a network of users which the administrator has access to as taught by Alma to have one of the plurality of destinations is a system administrator workstation where the router is arranged to route the document for manual routing after the manual routing decision.

For the purpose of the administrator to send and receive information from a plurality of destinations.

Claim 10

Masand, and White do not teach the features are formed into a feature vector for input to the classifier.

Alma teaches the features are formed into a feature vector for input to the classifier. (**Alma,** C11:64 through C12:11) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by using vectors as taught by Alma to have the features are formed into a feature vector for input to the classifier.

For the purpose of having inputted data into a form which maps to a neural network well.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negatived by the manner in which the invention was made.

Claims 11, 12, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Masand, and White, as set forth above, and further in view of Register. (U. S. Patent 5371807, referred to as **Register**)

Claim 11

Masand, and White do not teach at least one of classification associated words and phrases which may appear in the document.

Register teaches at least one of classification associated words and phrases which may appear in the document. (**Register,** C4:58-62) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by using words and phrases for input as taught by Register to have at least one of classification associated words and phrases which may appear in the document.

For the purpose of using words to classify documents that contain words.

Claim 12

Masand, and White do not teach the feature extractor is arranged to provide a measure of the frequency of occurrence of the features in the document.

Register teaches the feature extractor is arranged to provide a measure of the frequency of occurrence of the features in the document.(**Register,** C8:16-24) It would

have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by using frequency as a metric as taught by Register to have the feature extractor is arranged to provide a measure of the frequency of occurrence of the features in the document.

For the purpose of using the value of the frequency as a direct correlation towards a specific classification.

Claim 16

Masand, and White do not teach the computer implemented document classification apparatus is operable in the knowledge acquisition mode to process a plurality of training documents with associated classifications as a batch.

Register teaches the computer implemented document classification apparatus is operable in the knowledge acquisition mode to process a plurality of training documents with associated classifications as a batch. (**Register,** C3:37-52; 'Training' of applicant is equivalent to 'learning' of Register.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by being able to batch train as taught by Register to have the computer implemented document classification apparatus is operable in the knowledge acquisition mode to process a plurality of training documents with associated classifications as a batch.

For the purpose of getting the system running earlier by training with batches instead of individual documents one at a time.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13, 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Masand, and White, as set forth above, and further in view of Glier. (U. S. Patent 5479574, referred to as **Glier**)

Claim 13

Masand, and White do not teach the destinations include a system administrator workstation to which the other destinations are connected, misrouted documents being sendable by other destinations to the system administrator workstation for manual routing.

Glier teaches the destinations include a system administrator workstation to which the other destinations are connected, misrouted documents being sendable by other destinations to the system administrator workstation for manual routing. (**Glier,**

C14:50-58; 'Routing' of applicant is equivalent to 'classification' of Glier.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by having an administrator for assistance as taught by Glier to have the destinations include a system administrator workstation to which the other destinations are connected, misrouted documents being sendable by other destinations to the system administrator workstation for manual routing.

For the purpose of having another option for routing documents.

Claim 14

Masand, and White do not teach the system administrator workstation is connected to the feature extractor and the classifier, the arrangement being such that a misdirected document, in association with an actual classification supplied at the system administrator workstation, is processed in the knowledge acquisition mode to add the association of the actual classification with the misdirected document to the knowledge base.

Glier teaches the system administrator workstation is connected to the feature extractor and the classifier, the arrangement being such that a misdirected document, in association with an actual classification supplied at the system administrator workstation, is processed in the knowledge acquisition mode to add the association of the actual classification with the misdirected document to the knowledge base. (**Glier,** C14:50-58; 'Knowledge acquisition mode' of applicant is equivalent to 'retraining mode'

of Glier.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by having all the modules including the administrator connected as taught by Glier to have the system administrator workstation is connected to the feature extractor and the classifier, the arrangement being such that a misdirected document, in association with an actual classification supplied at the system administrator workstation, is processed in the knowledge acquisition mode to add the association of the actual classification with the misdirected document to the knowledge base.

For the purpose of being able to utilize all the modules and administrator they must be connected.

Claim 15

Masand, and White do not teach the classification apparatus is operable to perform a rule insertion in the knowledge acquisition mode in which a plurality of features are input by a user to the classifier together with a classification with which the features are associated.

Glier teaches the classification apparatus is operable to perform a rule insertion in the knowledge acquisition mode in which a plurality of features are input by a user to the classifier together with a classification with which the features are associated. (**Glier,** C14:50-58; 'Rule insertion' of applicant is equivalent to "add an additional network' of Glier.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and

White by being able to add rules as taught by Glier to have the classification apparatus is operable to perform a rule insertion in the knowledge acquisition mode in which a plurality of features are input by a user to the classifier together with a classification with which the features are associated.

For the purpose of having a flexible system that can be modified for a changing environment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Masand, and White, as set forth above, and further in view of Salgado. (U. S. Patent 5777882, referred to as **Salgado**)

Claim 19

Masand, and White do not teach a router operable in one of an automatic or manual mode to route the document to at least one of a plurality of destinations, wherein the router mode is switchable between the modes based on a comparison of the confidence value to a threshold.

Salgado teaches a router operable in one of an automatic or manual mode to route the document to at least one of a plurality of destinations, wherein the router mode is switchable between the modes based on a comparison of the confidence value to a threshold. (**Salgado,** C19:38-52; 'Automatic' of applicant is equivalent to "automatically' of Salgado. 'Manual mode' of applicant is equivalent to 'semi-automatically' of Salgado.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by beign ablew to switch from automatic to manual mode depending on a threshold outcome as taught by Salgado to have a router operable in one of an automatic or manual mode to route the document to at least one of a plurality of destinations, wherein the router mode is switchable between the modes based on a comparison of the confidence value to a threshold.

For the purpose of sending data to the system administrator when only the system cannot perform the given task.

Claim 20

Masand, and White do not teach the threshold is adjustable to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing.

Salgado teaches the threshold is adjustable to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing. (**Salgado,** C16:23-35; 'Threshold is adjustable' of applicant is equivalent to 'updating' of Salgado.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand and White by being able to adjust the threshold as taught by Salgado to have the threshold is adjustable to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing.

For the purpose of using the threshold so that the system or system administrator performs more classification duties.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

> to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Masand, White and Salgado as set forth above, and further in view of Glier. (U. S. Patent 5479574, referred to as **Glier**)

Claim 21

Masand, White and Salgado do not teach the user is a system administrator workstation coupled to the feature extractor and the classifier.

Glier teaches the user is a system administrator workstation coupled to the feature extractor and the classifier. (**Glier,** C11:34-38) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand, White and Salgado by having the modules and administrator connected as taught by Glier to have the user is a system administrator workstation coupled to the feature extractor and the classifier.

For the purpose of the administrator being able to train the classifier the administrator must be connected to the classifier.

Claim 22

Masand, White and Salgado do not teach the classifier is switched to the learning mode when a document has been determined to be misrouted.

Glier teaches the classifier is switched to the learning mode when a document has been determined to be misrouted. (**Glier,** C14:50-58; 'Switched to the learning mode' of applicant is equivalent to 'reorder the training set' of Glier.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand, White and Salgado by being able to switch to the learning mode as taught by Glier to have the classifier is switched to the learning mode when a document has been determined to be misrouted.

For the purpose of the system being able to train itself.

Claim 23

Masand, White and Salgado do not teach the system administrator classifies the document to provide an actual classification.

Glier teaches the system administrator classifies the document to provide an actual classification. (**Glier,** C11:34-38) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand, White and Salgado by having the administrator classify documents as taught by Glier to have the system administrator classifies the document to provide an actual classification.

For the purpose of being sure where it is suppose to be classified.

Claim 24

Masand teaches the classifier adds an association to the actual classification. (**Masand,** C6:47-59; 'Association' of applicant is equivalent to "per-target value weight' of Masand.)

Claim 25

Masand, White and Salgado do not teach the classifier is switched to the learning mode, a rule insertion sub-mode process is initiated by the user to train the classifier.

Glier teaches the classifier is switched to the learning mode, a rule insertion sub-mode process is initiated by the user to train the classifier. (**Glier,** C14:50-58; 'Rule insertion sub-mode' of applicant is equivalent to 'add an additional network' of Glier. 'User' of applicant is equivalent to 'user' of Glier.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Masand, White and Salgado by having a user initiate training as taught by Glier to have the classifier is switched to the learning mode, a rule insertion sub-mode process is initiated by the user to train the classifier.

For the purpose of lessening the workload of the system administrator by having users initiate training.

Response to Arguments

5. Applicant's arguments filed on July 6, 2006 for claims 1-4,9-25 have been fully considered but are not persuasive.

6. In reference to the Applicant's argument:
Initially, Applicants note that the previous After Final Reply, filed May 5, 2006, has not been entered by the Examiner. Applicants submit that upon entry of the present Reply, the claim listing provided herein replaces all previous versions and claim listings in this application.

Upon entry of the present Reply, claims 1-4, 9-17 and 19-25 will be pending. Claims 1 and 17 will have been amended to more clearly define the invention by substantially incorporating the claimed subject matter of original claims 8 and 18. Claims 8 and 18 will have been cancelled without prejudice or disclaimer. Claim 9 will have been amended to correct minor informalities while not affecting the scope of the claimed subject matter. And, claims 19-25 will have been added to afford the Applicants a scope of protection commensurate with other aspects of their invention. In view of the herein-contained amendments and remarks, Applicants respectfully submit that each of the claims now pending is allowable.

In the Advisory Office Action mailed June 12, 2006, the Examiner refused to enter the Reply filed after Final Office Action, filed May 5, 2006, noting under items 3(a) and 3(b) of the Advisory Action that the Reply raised new issues that would require further consideration and/or search and that the amendments were not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal. In the "continuation of 11" section of the Advisory Action, the Examiner noted that the "learning mode" was talked about during the telephone interview on April 21, 2006, but is not claimed. The undersigned has a added new claim 19, which clearly recites a "learning mode."

The Examiner also stated that "Alma [sic] teaches routing decision between manual or automatic routing. (Alma [sic], C5:59 through C6:10 & C10:26-34) The decision between the two is based on a threshold. (Alma (sic], C10:1-25) Another location for this information is (Alma [sic], C10:26-40; `Manual' and 'automatic' of applicant is equivalent to 'operator' and 'auto' of Alma [sic].)." Applicants respectfully submit that the Examiner is relying on portions of ALAM ET AL.'s teachings, but h'as failed to consider the ALAM ET AL. teachings in conjunction with, inter alia, the REGISTER patent, for example, which is the primary reference relied on in the Examiner's rejections. Applicants submit that claims 1-4, 9-17 and 19-25 are patentable for at least the reasons provided below.

In the Final Office Action mailed February 6, 2006, the Examiner rejected claims 1-4 and 8-18 under 35 U.S.C. §103 as being unpatentable over six references, i.e. three U.S. Patents and three articles. The Examiner rejected the claims as being unpatentable over the combination of REGISTER et al. (U.S. Patent No. 5,371,807)

in view of ALAM et al. (U.S. Patent No. 6,104,500), and further in view of TAN (article, "Adaptive Resonance Associative Map," Neural Networks Vol. 8, No. 3) and further in view of WITEK (U.S. Patent No. 5,461,488) and further in view of KANNAN (article, "A Hybrid Architecture for Text Classification," Nov. 1992, Proc. Of the 1992 IEEE Intl. Conf. On Tools with AI 1992) and TAN at al. (article, "Learning User Profiles for Personalized Information Dissemination," IEEE World Congress on Computational Intelligence, the 1998 IEEE International Joint Conference on Volume 1, 4-9 May 1998). Applicants respectfully traverse the rejections for at least the following reasons. The undersigned notes that to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Furthermore, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Lee, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir, 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as noted above, obviousness has not been established.
Applicants submit that there would have been no motivation to combine REGISTER et al., ALAM et al., TAN, WITEK, KANNAN and TAN et al. as proposed by the Examiner in the above noted Official Action.

REGISTER et al. teach a text classification core structure to be used with external applications. See, e.g., column 2, lines 17-19. Referring to Figure 2, for example, the reference system takes natural language input text (i.e., module 32), parses it into a first list of recognized keywords, then uses the first list to deduce further facts from the natural language input text. The system then compiles the deduced facts into a second list (i.e., module 34). Then, using the first list, REGISTER et al. calculate a numeric similarity score for each one of a plurality of categories, indicating how similar one of the plurality of categories is to the recognized keywords in the first list. The system

then applies a dynamic threshold to the similarity scores to determine the most similar categories to the recognized keywords of the natural language input text (i.e., module 36). The output from the Similarity Measuring Module 36 is a third list, which includes the plural categories that are measured to be most similar to the input keywords. Finally, "the first, second and third lists can be passed to the external application for application specific processing" [emphasis added]. See column 2, lines 38 to 51 of REGISTER et al.

Alam et al. teach a network fax routing via email system. This reference teaches an automated routing system that accepts input facsimiles, extracts address information using OCR technology, generates a probable addressee and routes the input facsimile via email to the addressee. See, e.g., column 5, line 59 to column 6, line 10. Alam et al.'s router 44 (e.g., Figures 3 and 5) uses a single address to route the facsimile to an intended recipient. If, however, the system is unable to find a match, it forwards the facsimile to a human operator to manually route the facsimile document. See, e.g., column 10, lines 26 to 40 for example.

The Examiner posits, i.e., in the above noted Official Action, that it would have been obvious to "modify the teachings of Register by using the router [of Alam et al.] to compare confidence values (likelihood) with thresholds and if no results were found to move to a manual route practice as taught by Alam to have a router arranged to route the document to one of a plurality of destinations..." See page 4 of the above noted Official Action. The undersigned submit that this motivation is guided by hindsight and not what the references teach or suggest to one of ordinary skill in the art.

The ordinary skilled artisan, if placed in the possession of the REGISTER et al. and ALAM et al. patents, for example, would readily recognize that the facsimile routing system of ALAM et al. (e.g., Figure 3), would serve as the external application 24 in REGISTER et al. As such, ALAM et al.'s router 44 would be provided with first, second and third lists (see, e.g., REGISTER at al., column 2, line 55), instead of the single address for which the router is designed (see, e.g., ALAM et al., column 10, lines 26-40). In other words, because ALAM et al.'s router works only when provided with a single destination, REGISTER et al.'s multiple list information would render the ALAM router non-functional and all routing would be done by a human operator. Thus, contrary to the Examiner's assertion, it would not have been obvious to combine the router of ALAM et al. with the classification system of REGISTER et al.
The other four references, i.e., TAN, WITEK, KANNAN and TAN et al. proposed by the Examiner, fail to correct the inadequacy in motivation discussed above. Hence, it appears that the Examiner has been guided by impermissible hindsight in picking and choosing different elements from different prior art references in an attempt to reject the claimed subject matter.

Examiner's response:

The statement 'ALAM et al.'s router works only when provided with a single destination, REGISTER et al.'s multiple list information would render the ALAM router non-functional and all routing would be done by a human operator," was made by Mr. William Pieprz during the phone interview. The Examiner responded by stating the list could be a list of one. With this viewpoint the applicant's argument is moot.

7. In reference to the Applicant's argument:
Thus, there would have been no motivation to combine REGISTER et al., ALAM et al., TAN, WITEK, KANNAN and TAN et al. as proposed by the Examiner.

More so, the Office Action has not demonstrated that there would be an expectation of success in combining the teachings of REGISTER et al., ALAM et al., TAN, WITEK, KANNAN and TAN et al. as demonstrated above by failure of ALAM et al.'s router to function with the system of REGISTER et al. Furthermore, the Office Action has not provided an example of how one of ordinary skill in the art would have combined the six systems to render a functional system that would meet all of Applicants' claimed subject matter.

Finally, the Office Action has not established the third requirement for a prima facie case of obviousness. Namely, the Office Action has not demonstrated that the combination of REGISTER et al., ALAM et al., TAN, WITEK, KANNAN and TAN et al., even if it were possible, would disclose all of the claimed features. The Applicants submit that none of the references, taken alone or in combination, address all of the claimed subject matter. The posited combination of references does not teach or suggest, alone or in combination, the claimed router arranged to make an automatic or manual routing decision in dependence upon a comparison between a document classification confidence value and a threshold, in the context of the remaining claimed subject matter.

In the "Response to Arguments" section of the above noted Final Office Action, the Examiner posits that the claimed confidence value is equivalent to the "similarity score" of REGISTER et al. or the "likelihood" score of ALAM et al. The undersigned submits that this is not the case. To the contrary, the similarity score in REGISTER et al, is in fact a plurality of scores that reflect associations of a plurality of categories to the parsed input text. See, e.g., column 10, line 31 et seq. of REGISTER et al. This is very different from the claimed confidence value, which is a single value associated with a single classification.

In an effort to expedite prosecution, the Applicants have amended independent claims 1 and 17 to more clearly define Applicants' claimed subject matter. Both claims now recite, "wherein the threshold is adjustable to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing." As discussed above in considerable detail, none of the cited prior art teaches or suggests, alone or in combination, Applicants' claimed subject matter. The further clarifying language added to claims 1 and 17 thus further emphasizes the distinctions over the cited art.

For at least the reasons set forth above, all of the pending claims are submitted to be in condition for allowance. Thus, Applicants respectfully request withdrawal of all rejections and timely allowance of all of the pending claims.

Examiner's response:

In response to the argument that there is no motivation to combine the references the Examiner reminds the applicants that two references are by the inventors themselves. In general responding to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is not what individual references themselves suggest but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. In re Keller, 648 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Sernaker, 702 F.2d 989, 217 USPQ 1 (Fed. Cir. 1983); In re McLaughlin, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In re Bozek, 163 USPQ 545 (CCPA 1969).

Examination Considerations

8. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, l 45-48; p 2100-9, c 1, l 1-4). The Examiner has the full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

9. Examiner's Notes are provided to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and sprit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but link to prior art that one of ordinary skill in the art would find inherently appropriate.

10. Examiner's Opinion: Paragraphs 8 and 9 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

11. Claims 1-4, 9-25 are rejected.

Conclusion

12. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure.

-U. S. Patent 5937084: Crabtree

-U. S. Patent 5873056: Liddy

-U. S. Patent 5675710: Lewis

-U. S. Patent 5586175: Hogan

-U. S. Patent 5832470: Morita

-U. S. Patent 5812995: Sasuki

-U. S. Patent 5461488: Witek

Correspondence Information

13. Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner Peter Coughlan, whose telephone number is (571) 272-5990. The Examiner can be reached on Monday through Friday from 7:15 a.m. to 3:45 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor David Vincent can be reached at (571) 272-3687. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

Hand delivered to:

Receptionist,

Customer Service Window,

Randolph Building,

401 Dulany Street,

Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

or faxed to:

(571) 273-8300 (for formal communications intended for entry.)

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Peter Coughlan

10/11/2006

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